Glenn Research Center, Environmental Programs Manual

Chapter 8 - SPILL CONTROL

NOTE: This new Chapter is created, maintained and approved by the Safety, Health and Environment Division (SHED). The last revision date of this chapter was June 2008. The current version is maintained on the Glenn Research Center intranet at http://smad-ext.grc.nasa.gov/shed/pub/epm/epm-manual.pdf. Approved by: Environmental Management Branch Chief, Priscilla Mobley

PURPOSE

This chapter establishes policies and procedures for dealing with projects and programs at Cleveland and Plum Brook Station that have the potential to contaminate indoor or outdoor environments with spilled material (i.e., oil, chemicals, asbestos, etc.). This chapter conforms to the GRC EMS as defined in Environmental Management Systems Manual Chapter 1. This chapter supports GRC Environmental Policy, which promotes pollution prevention, regulatory compliance, and continuous improvement.

Following the guidelines in this chapter will help achieve some of the GRC environmental objectives and targets such as the reduction of spills and releases, the identification and implementation of pollution prevention activities, and the reduction of solid waste generation. Achievement of these targets can be tracked through the following record(s) Emergency Incident Reports, P2 Committee & Plan Results, number of regulatory non-compliances found, and the number of reduction, reuse, or recycling opportunities identified.

APPLICABILITY

This chapter applies to all personnel at the GRC including, but not limited to, civil servants, contractors, and academic visitors.

DEFINITIONS

Non-reportable quantity (NRQ) spills
: Spills that present low hazard potential to workers or to the environment. Non-reportable quantity spills can be contained and cleaned up with only minor difficulty. Cleanup of non-reportable spills is the responsibility of the GRC directorate managing the material. Outside support may not be necessary for non-reportable quantity spills.

Reportable quantity (RQ) spills
: Spills that often involve large volumes of material and present significant hazards to workers or to the environment. Any spill reportable under EPA Regulations, 40 CFR 302 shall be considered a reportable quantity spill. Reportable quantity spills include, but are not limited to, the materials and volumes given in appendix B under extremely hazardous substances (EHS) reportable quantities or CERCLA reportable quantities. All expenses incurred as a result of a reportable quantity release will be charged to the organization responsible for the spill.

Hazardous material
: Any material defined as hazardous under 29 CFR 1910.120(c) including material presenting health and/or physical hazard. Such material has one or more toxic, flammable, corrosive, or reactive properties. All materials listed under Title M of the Superfund Amendments and Reauthorization Act of 1986 (SARA) are included.

POLICY

It is GRC policy to minimize spill potential through engineering and administrative controls. Should a spill occur, containment and cleanup procedures shall be promptly implemented to assure compliance with all applicable Federal, State, and local regulations and to minimize the effect on the environment.

REQUIREMENTS

Contingency plans are required by 40 CFR 300, which was authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Contingency plans call for planning the response to and cleanup of a spill. Annex Q of the GRC Emergency Preparedness Plan (EPP) is used to fill the needs of the GRC Hazardous Waste Operations and Emergency Response (HAZWOPER), as required by OSHA/29 CFR 1910, and the contingency plan. Employees are required to receive spill prevention training and proper response to spills of hazardous materials.

Spill Prevention Control and Countermeasure (SPCC) plans are required by 40 CFR 112, which was authorized by the Clean Water Act. The SPCC Plan describes spill prevention structures, procedures, and equipment that are already in place and recommends the construction of any additional spill containment structures. The plan should describe the measures being taken at facilities with petroleum products to prevent spills from occurring. It should also specify the actions to be taken should an oil spill occur.

The Environmental Spill and Contingency Plan (ESCP), has been written to meet the needs of 40 CFR 300, 29 CFR 1910, and 40 CFR 112.

PROCEDURES

When the responsible entity at Plum Brook differs from its Glenn (Cleveland) counterpart, the name of the responsible entity at Plum Brook is given in parentheses.

Users

The primary responsibility for spill prevention lies with the user. The Environmental Management Branch (EMB) is available to advise users on prevention methods. Reaction to a spill shall be preplanned and incorporated into use procedures. Specific responsibilities include:

- Reporting any spill by calling 911/3-8888, the Glenn Emergency Dispatch Center (EDC) or Plum Brook Communications Center (PBS 4-3221 or 4-3226). If possible, identifying the material and estimating the volume released.
- For small spills and in the absence of a safety permit, by calling Glenn EDC (911, 3-8888) or Plum Brook Communications Center, then attempting to contain and clean up the spill.
- For larger spills, taking immediate emergency response actions as required under the safety permit or, in the absence of a safety permit, calling Glenn EDC (911, 3-8888) or Plum Brook Communications Center, then attempting to contain the spill, if possible or practical. If there are any questions with regard to safety, evacuate the area.
- Maintaining containment and cleanup supplies necessary for small spills. Additional supplies may be requested from the Waste Management Team at 3-2124 or, at Plum Brook, from the support service contractor environmental staff.
- Completing an incident report on the Incident Reporting Information System (IRIS) Website at https://nasa.ex3host.com/iris/newmenu/login.asp.
- Receiving spill prevention training and proper response to spills of hazardous materials.

The cost of cleaning up a spill will be charged to the directorate responsible for the spill.

Discoverer of a Spill

- Reports the spill to the Glenn EDC (911, 3-8888) or at Plum Brook to the Communications Center (4-3221 or 4-3226).

Environmental Management Branch at GRC (Plum Brook Station)

- Notifies Federal and local regulatory agencies of spills as required in the ESCP Plan (PBMO Environmental Manager).

• Maintains the ESCP and updates it as necessary (Plum Brook support service contract environmental staff).
• Maintains current lists of reportable quantities and provides technical advice to responders (Plum Brook support service contract environmental staff).
• Provides technical advice to the spiller (Plum Brook support service contract environmental staff).
• Assists Safety Office in investigations (Plum Brook support service contract environmental staff).
• Assists in determining exposure limits, personal protective equipment, and containment measures (Plum Brook support service contract environmental staff).
• Serves as the Incident Commander during the response and recovery phases of environmental emergencies (PBMO Environmental Manager).
• Maintains spill containment and clean up supplies. (Plum Brook support service contract environmental staff.)
• Provides containment and cleanup at spill sites whenever possible, usually through an independent contractor. (The support service contract environmental staff at Plum Brook.)
• Maintains complete documentation for initial reports on all reportable quantity spills and for non-reportable quantity spills. These reports will be copied to Safety, Health, and Environmental Board and the Safety Office at Glenn. (The support service contract environmental staff and the PBMO Environmental Manager.)
• Notifies the GRC Office of Public Affairs (PBMO Environmental Manager)

Glenn Security Management and Safeguards Office and Plum Brook Station Plant Protection

• Provides area control and security at spill sites.
• Serves as Emergency Preparedness Coordinator (PBMO Environmental Manager).
• Develops and maintains the GRC and Plum Brook Emergency Preparedness Plan

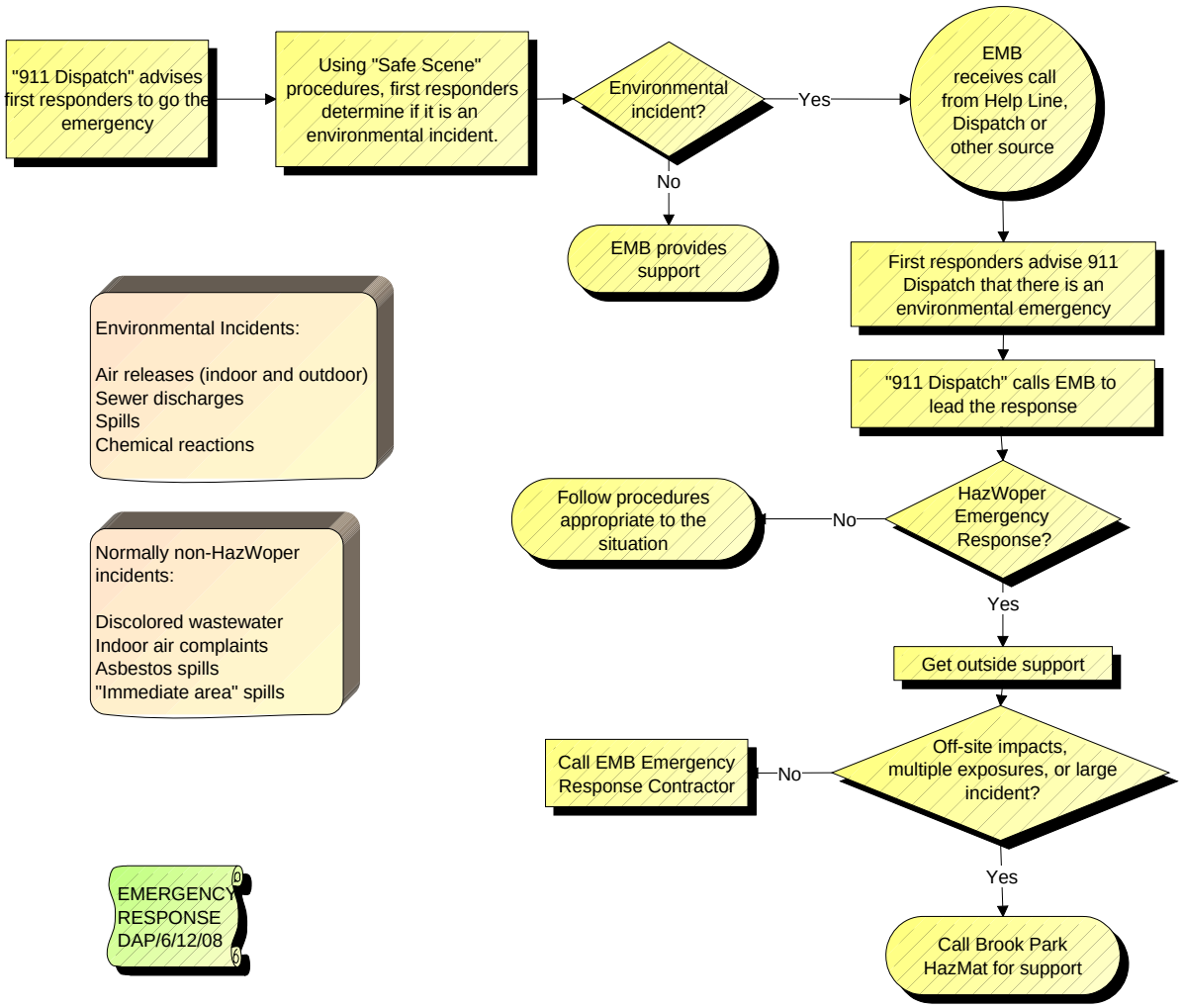
Safety Branch

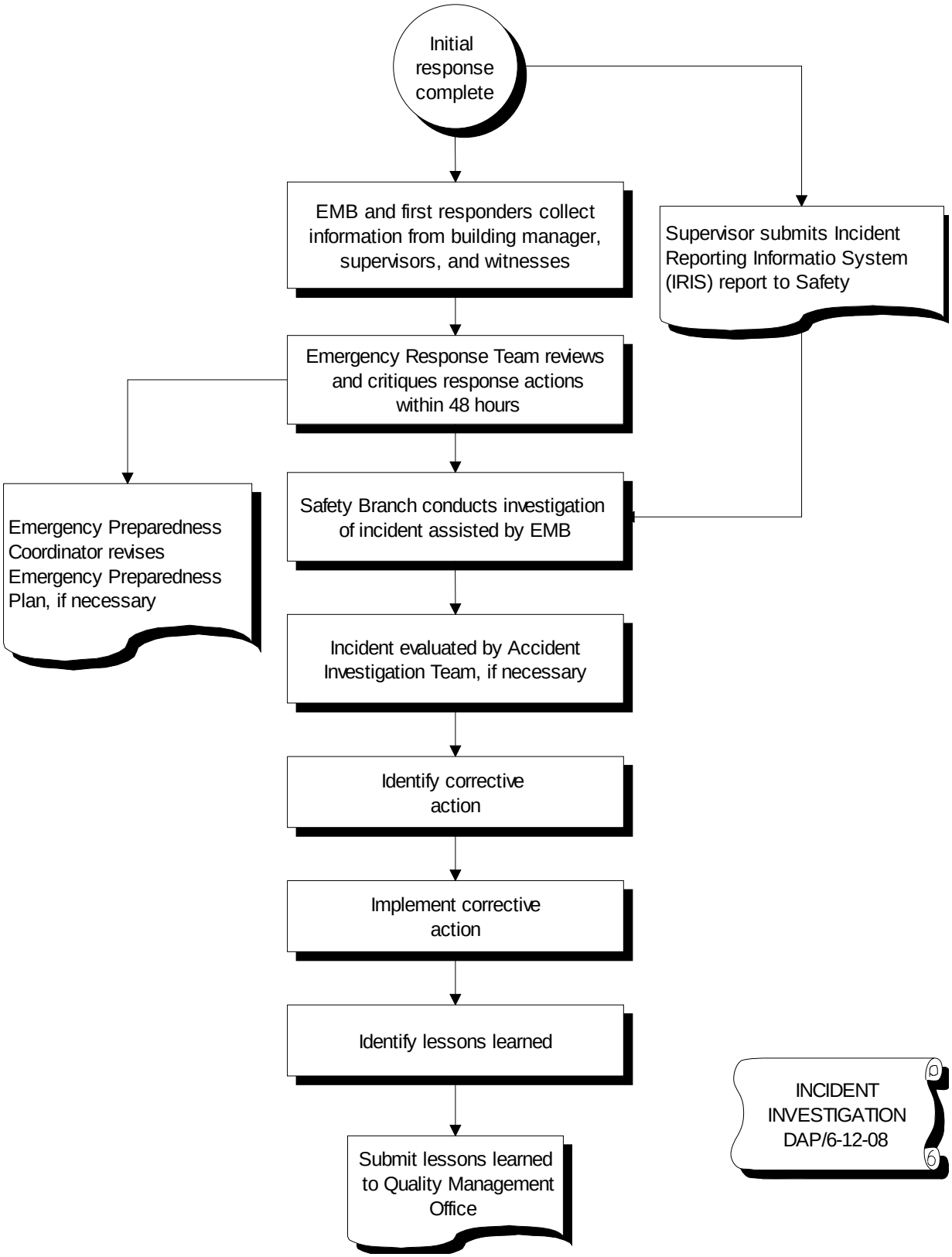
• Advises GRC and NASA Headquarters senior management of the event as necessary (PBMO Environmental Manager).
• Investigates the causes of the spills and recommends procedures or policies to prevent a reoccurrence (Plum Brook support service contract environmental staff).
• Develops and maintains the GRC and Plum Brook Emergency Preparedness Plan.

Medical Services

• Makes medical assessments of injuries related to exposures to hazardous chemicals.

FLOW CHARTS


"911 Dispatch" advises first responders to go the emergency
Using "Safe Scene" procedures, first responders determine if it is an environmental incident.
Environmental incident?
Yes
No
EMB receives call from Help Line, Dispatch or other source
EMB provides support
First responders advise 911 Dispatch that there is an environmental emergency
"911 Dispatch" calls EMB to lead the response
HazWoper Emergency Response?
No
Follow procedures appropriate to the situation
Yes
Get outside support
Off-site impacts, multiple exposures, or large incident?
No
Call EMB Emergency Response Contractor
Yes
Call Brook Park HazMat for support
Environmental Incidents:
Air releases (indoor and outdoor)
Sewer discharges
Spills
Chemical reactions
Normally non-HazWoper incidents:
Discolored wastewater
Indoor air complaints
Asbestos spills
"Immediate area" spills
EMERGENCY RESPONSE DAP/6/12/08


Initial response complete
EMB and first responders collect information from building manager, supervisors, and witnesses
Supervisor submits Incident Reporting Informatio System (IRIS) report to Safety
Emergency Response Team reviews and critiques response actions within 48 hours
Emergency Preparedness Coordinator revises Emergency Preparedness Plan, if necessary
Safety Branch conducts investigation of incident assisted by EMB
Incident evaluated by Accident Investigation Team, if necessary
Identify corrective action
Implement corrective action
Identify lessons learned
Submit lessons learned to Quality Management Office
INCIDENT INVESTIGATION DAP/6-12-08

RECORDS

- Environmental Spill and Contingency Plan
- Spill Reports

The Emergency Preparedness Coordinator of the Glenn Security Management Office maintains the following record:

- Emergency Preparedness Plan

The Safety Branch maintains the following record:

- Incident Reporting Information System (IRIS)

REFERENCES

Clean Water Act, Section 311
40 CFR Part 212 Oil Pollution Prevention

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Safety, Health and Environment Division (SHED)
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